

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001104**Date Inspected:** 24-Dec-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 830**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Fabrication**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Orthotropic Box Girder (OBG) and Tower Mock Up:

CWI Inspectors: Mr. Wu Ming Kai and Mr. Wang Nan

The QA Inspector observed ZPMC welder Mr. Wei Dashuai stencil 51246 is using welding procedure specification WPS-B-T-2132-2 to make flux cored fillet tack welds on OBG plate 80B stiffener welds SP025-01-030 and SP025-01-031. The QA Inspector observed a welding current of approximately 285 amps, 28.5 volts and the base material has a minimum preheat of 60° C. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC welder Ms. He Yu Mei stencil 48625 is using welding procedure specification WPS-B-T-2132-21 to make flux cored fillet tack welds on OBG plate 87B stiffener welds SP004-01-006. The QA Inspector observed a welding current of approximately 280 amps, 28.0 volts and the base material has a minimum preheat temperature of 60° C. Items observed by the QA Inspector appear to comply with project specifications.

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The QA Inspector observed ZPMC welder Mr. Zhang Feng stencil 54467 is using welding procedure WPS-B-P-2112 to make a shielded metal arc groove weld on MSUB-MA25 weld 19A. The QA Inspector observed arc E7018 4.0 mm diameter electrodes and a welding current of approximately 155 amps and a minimum base material preheat temperature of 60° C. Items observed by the QA Inspector appear to comply with project specifications.

The QA Inspector observed ZPMC personnel perform flame straightening of OBG side plate SP47 as directed by HSR1(B)-131. The QA inspector observed Quality Control CWI Inspector Mr. Duan Yabing monitoring the heat temperature using a laser indicating device, and the maximum temperature that had been recorded on the HSR document is 396° C. Items observed appear to comply with the requirements of the HSR listed above. No weights were placed on this plate during this flame straightening. This work is taking place on an elevated platform approximately six feet above the adjacent floor.

ZPMC QC Representative Mr. Zhang Jiadi informed the Caltrans Quality Assurance (QA) Inspector that the following complete penetration joint welds are ready for Caltrans ultrasonic inspection: SP017-01-001, SP063-01-053 and SP013-01-001

The QA Inspector observed ZPMC nondestructive inspector Mr. Li Ming performing ultrasonic (UT) shear wave and lamination inspections of the weld between plate PL89A and PL89B. The QA Inspector observed Mr. Ming has indicated this weld has an ultrasonic rejection, see the photograph below for additional information. Items observed by the QA Inspector appear to comply with project specifications.



Summary of Conversations:

See above for summary of conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By: Dawson,Paul

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer